

Guide to Grade 6

Released Item Books
In READING and MATHEMATICS



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Guide to Grade 6 Released Item Books in Reading and Mathematics

This document contains information for using, scoring, and interpreting the released items in reading and mathematics.

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Guide to Released Item Books

Please help us improve this document. We welcome your comments and questions.
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Introduction

What are released items?

The items in the Reading and Mathematics released item books are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in the released item books illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

How do I use the released item books and this guide?

Professional Development

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

This guide provides instructions for administering the released item books as practice tests and information for scoring the items, including scoring guides and anchor papers for the constructed-response items. The item information tables identify the answer key, what each item measures, depth of knowledge, and item difficulty. Item difficulty is presented as both the percentage of students who answered the item correctly and the scale score location of the item. The item's scale score location describes where the item functions along the ability scale. Items with higher scale score locations are considered more difficult than items with lower scale score locations. Students with scale scores above the scale score location of the item would have a greater probability of answering the item correctly than students with scale scores below the item's scale score location.

Improving Instruction

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

Student Practice

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. Note that a student's score on the practice test cannot be converted to a total scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

Reading

Sample Directions for Administering the Reading Test

Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, and scratch paper. Students' test books should be closed.

SAY In this test, you will read some passages and answer both multiple-choice questions and short-answer questions about those passages. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Write your answer on the lines in your test book. You may also write in the space under the lines, but your answer must stay inside the boxed area. Answers or parts of answers written outside the boxed area will not be scored. You may use scratch paper to help you plan your answer, but remember to write your answer in the boxed area in your test book. After you have written your answer, be sure to read it to make sure you have written your ideas clearly and completely.

For both the multiple-choice questions and the short-answer questions, remember to look back at the reading passages to help you answer the questions. For some questions, you may need to go back to two reading passages to find the answer. Be sure to look back at both reading passages to help you answer these questions.

You will have 40 minutes to do the test. Work until you come to the word “STOP” at the bottom of the page. You may go back and check your answers. When you have finished, sit quietly until everyone else has finished.

Are there any questions?

When you are sure that all students understand the directions, continue.

SAY Please open your test book to Page 2.

Demonstrate. Check to be sure that all students are in the correct place in their test books.

SAY You may begin.

Record the starting and stopping times.

Record the Starting Time:	Add 40 Minutes:	Record the Stopping Time:
_____	_____ + 40	_____

Check to be sure that students are marking their answers in the appropriate places in their test books.

At the stopping time,

SAY **Stop. This is the end of the test. Please close your test book.**

Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.

Reading Item Information

				2005 –06 Item Statistics					
				SR: Percent of Students who Chose A, B, C, or D (*Indicates Correct Response).					
				BCR: Percent of Students who Received 0, 1, 2, or 3 Points					
Item	Answer Key	Objective/ Subskill	Depth of Knowledge Level	Format	A or 0	B or 1	C or 2	D or 3	Scale Score Location
1	D	2.1	2	SR	3%	3%	6%	*87%	439
2	B	3.3	3	SR	14%	*62%	9%	13%	507
3	B	2.3	1	SR	3%	*90%	4%	2%	433
4	A	3.1	3	SR	*80%	1%	14%	4%	443
5	B	2.1	1	SR	33%	*48%	14%	4%	524
6	A	4.1	3	SR	*48%	8%	34%	9%	538
7	B	4.1	3	SR	10%	*69%	13%	6%	512
8	A	3.1	2	SR	*80%	2%	9%	7%	447
9	C	1.1	2	SR	4%	5%	*80%	9%	545
10	D	3.2	2	SR	4%	3%	10%	*82%	451
11	A	2.2	1	SR	*69%	18%	7%	5%	488
12	D	3.2	3	SR	5%	14%	4%	*76%	470
13	A	2.2	2	SR	*74%	10%	2%	14%	456
14	B	2.3	1	SR	11%	*55%	25%	8%	531
15	C	4.2	2	SR	18%	8%	*65%	8%	499
16	C	1.1	1	SR	12%	6%	*51%	30%	519
17	C	4.3	3	SR	8%	19%	*53%	19%	515
18	C	3.3	1	SR	11%	3%	*79%	5%	471
19		3.2	3	BCR	15%	51%	26%	6%	562

Objective/Subskill and Depth of Knowledge Level information follows this table.
 SR: selected response; BCR: brief constructed response.

Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
417 and below	418–456	457–513	514 and above

Reading Objectives and Subskills

Types of Text

The grade 6 reading assessment presents a variety of grade-appropriate reading passages representing literary, informational, and everyday text. Passages may be up to 1,500 words long and some passages may be paired with other, related passages. Students may be asked to read and answer questions about texts such as these:

Literary	Informational	Everyday
Realistic fiction, poetry, drama, biography, autobiography, historical fiction, myths	Magazine, textbook, and newspaper articles, government documents	Charts, schedules, simple forms, applications (for example, camp), product labels, safety notices, simple instructions

Objectives, Subskills, and Descriptors

Objectives (labeled 1, 2, 3, and 4) and subskills (labeled 1.1, 1.2, etc.) denote general knowledge and skills that are assessed and reported on the WKCE-CRT. Bulleted descriptors are *examples* of specific knowledge or skills that may be included within each subskill. The subskills include knowledge and skills *such as, but not limited to* the descriptors.

1. Determine the meaning of words and phrases in context.

1.1. Use context clues to determine the meaning of words and phrases.

- Use context clues to determine the meaning of unfamiliar words.
- Understand the meaning of words and phrases used figuratively.
- Use context clues to determine the meaning of multiple-meaning words.
- Use knowledge of synonyms and antonyms to determine the meaning of words.
- Identify analogies to demonstrate understanding of word meaning.

1.2. Use knowledge of word structure to determine the meaning of words and phrases.

- Identify the meaning of contractions.
- Use knowledge of compound words to determine the meaning of a word.
- Identify how adding an affix changes the meaning of a word.
- Identify the meaning of a word with an affix.
- Use knowledge of root words to determine the meaning of a word.

1.3. Use word reference materials to determine the meaning of words and phrases.

- Use an entry from a word reference to determine word meaning and pronunciation.

2. Understand text.

2.1. Demonstrate understanding of literal meaning by identifying stated information in literary text.

- Identify stated information about story elements.

2.2. Demonstrate understanding of literal meaning by identifying stated information in informational text.

- Identify stated information about main ideas and supporting details.
- Identify stated information provided through text features.

2.3. Demonstrate understanding of explicitly stated sequence of events in literary and informational text.

- Identify first, next, and last events.
- Follow steps in a process.

3. Analyze text.

3.1. Analyze literary text.

- Make inferences about story elements.
- Summarize important ideas and events.
- Analyze stated or implied theme, message, or main idea.
- Draw conclusions.
- Identify purpose.
- Make inferences based on text features or visuals.

3.2. Analyze informational text.

- Identify implied main ideas and supporting details.
- Identify implied relationships (such as cause/effect and compare/contrast).
- Summarize information.
- Identify purpose.
- Make inferences based on text features.
- Make inferences based on visual information.
- Make inferences about text structure.
- Make inferences about the author's point of view.

3.3. Analyze author's use of language in literary and informational text.

- Analyze the use of literary devices.
- Recognize and distinguish among genres.
- Make inferences about the author's tone.
- Make inferences about the author's style.

4. Evaluate and extend text.

4.1. Evaluate and extend literary text.

- Extend themes and concepts to other situations.
- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.

4.2. Evaluate and extend informational text.

- Make connections to text.
- Make predictions.
- Identify and evaluate the author's purpose, point of view, and effectiveness.
- Distinguish between facts and opinions.
- Evaluate the accuracy, currency, and credibility of information.

4.3. Evaluate and extend the author's use of language in literary and informational text.

- Evaluate the author's word choice and use of language.

Reading Depth of Knowledge

These depth of knowledge levels are intended to reflect the level of cognitive demand placed on students by test items. As the level of cognitive demand increases, so does the mental effort and integration of information required to answer a test item successfully. Each level represents important cognitive skills, and each level requires the use of cognitive skills in lower levels. For example, a student who is asked to make connections between two texts (level 4) would also need to recall pertinent details from the texts (level 1), understand stated information in the texts (level 2), and make inferences and draw conclusions about each text (level 3). The levels assume grade-appropriate text, vocabulary, and tasks. Test items should represent a range of depth of knowledge levels, and items within each level may represent a range of difficulty as indicated by percentage of students who answered the item correctly or scale score location.

Level 1: Recognizing and Recalling

Students demonstrate a grade-appropriate ability to recognize or recall basic facts, terms, or definitions. For example, a student might be asked to identify an explicitly stated main idea in a text.

Level 2: Using Fundamental Concepts and Procedures

Students demonstrate a grade-appropriate ability to use basic facts, definitions, skills, or concepts. For example, a student might be asked to use information in a text to complete a graphic organizer.

Level 3: Concluding and Explaining

Students demonstrate understanding of grade-appropriate text by using stated and implied information and text elements to draw conclusions. Students explain and convey ideas effectively. For example, a student might be asked to provide details and examples from a text to support a conclusion.

Level 4: Evaluating, Extending, and Making Connections

Students demonstrate their knowledge of concepts when evaluating or interpreting grade-level text. Students make connections among texts, common experiences, and issues. For example, a student might be asked to evaluate an author's effectiveness in achieving an intended purpose.

Reading Rubric for Constructed-Response Items

3 points

- The response demonstrates *thorough understanding* of the reading concept embodied in the task.
- The response is *accurate, complete, insightful, and fulfills all the requirements* of the task.
- Necessary support and/or examples are included.
- Information is clearly *text-based*.

2 points

- The response demonstrates *partial understanding* of the reading concept embodied in the task.
- The response is *accurate* and *fulfills most of the requirements* of the task.
- Necessary support and/or examples may not be complete or clearly text-based.

1 point

- The response demonstrates *an incomplete understanding* of the reading concept embodied in the task.
- The response provides *some information that is text-based*, but does not fulfill the requirements of the task.
- Information provided is *too general* or *too simplistic*.
- Necessary support and/or examples may be incomplete or omitted.

0 points

- The response demonstrates *no understanding* of the reading concept embodied in the task.
- The response is *inaccurate, confused, or irrelevant*.
- The student has *failed to respond to the task*.

Reading Constructed-Response Item Scoring Guide

Forms: Public Release	Item #: 19	Item Type: BCR	TB Page #: 9	AB Page #: n/a
Reporting Category: Reading				Max Score Pts: 3
Objective: 3. Analyzes Text				
Subskill: 3.2. Analyzes informational text				
Descriptor: Summarizes information				

Item Stem

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your response on the lines below.

Responses should be evaluated according to the guidelines outlined below for each score point.

3 points

- The response **demonstrates a thorough understanding** of the process by which cranberries are harvested and how they are used today.
- The response **accurately and completely explains** how cranberries are harvested in the cranberry bogs and how their ability to float is essential for harvesting them this way. It should also explain how the berries are used today. The response may include selected facts from the text such as: growers flood their fields; a paddle boat-like machine beats the plant and loosens the ripe berries; the berries are collected by a crew who push the berries to the edges of the bogs; cranberries are used today in juice and sauce.
- The response is **very well supported with examples and information from the text**. The answer should include all of the information necessary to give a thorough summary of how cranberries are harvested how they are used today.

2 points

- The response **demonstrates a partial understanding** of how cranberries are harvested and used today.
- The response **accurately summarizes the essential information** but fails to explain how cranberries ability to float is essential to this process. The response may also lack one or more steps in the process used to harvest cranberries or fail to explain modern uses for the berries.
- The response provides information that is **generally text-based** but **fails to explain** why the process for harvesting cranberries is unique or fails to give a complete description of the process.

1 point

- The response **demonstrates an incomplete understanding** of the information presented in the passage about how cranberries are harvested and used today. The response contains **inaccurate or very incomplete information**. For example, the answer may explain **only** how farmers learned that cranberries bounce (incorrect) or only that cranberries can float (simplistic).
- The response **fails to provide enough specific text-based details** to explain the complete process for harvesting cranberries or how they are used today, although some information about cranberries is present.

Anchor Papers for Reading Constructed-Response Item

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

In order to harvest cranberries, you need to see which ones are ripe. The ripe ones float and bounce. First, you have to flood the cranberry bogs. Then, a machine beat the plants to loosen the fruit. After that, they take wooden tools and the cranberries to the end of the bog. This called rafting. Finally, the ripe cranberries are then sold for people to eat. Today, cranberries are used in juice and in sauce. They're especially eaten during Thanksgiving Day.

Score Point 3

- >Response demonstrates a thorough understanding of the process by which cranberries are harvested and how they are used today.
- >Response accurately and completely explains how cranberries are harvested by using examples and information from the text.
- >Response demonstrates an understanding of the concept that cranberries have the ability to float, "The ripe ones float..."
- >Response includes how cranberries are used today, "...used in juice and sauce."

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Most growers harvest their crops by "flooding their fields or cranberry bogs". Then a machine beats the plants which shakes the berries loose. When they float, they are "rafted", or pushed toward the shore, where they are boxed. Then they are used for sauce and juice.

Score Point 3

- >Response demonstrates a thorough understanding of the process by which cranberries are harvested and how they are used today.
- >Response, although brief, accurately explains how cranberries are harvested by using examples and information from the text.
- >Response demonstrates an understanding of the concept that cranberries have the ability to float, "When they float..."
- >Response includes how cranberries are used today, "...they are used for sauce and juice."

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

First, you flood the fields or cranberry bogs. Secondly, A machine much like a paddle boat, beats the plants, loosing the fruit. Next, The ripe cranberries float to the surface and are collected in a process called rafting. During rafting, the cranberry-gathering crew pushes the floating berries with long wooden tools to the end of the bog. Lastly, the berries are gathered up and placed in boxes.

Score Point 2

- >Response demonstrates a partial understanding of how cranberries are harvested and used today.
- >Response accurately and completely explains how cranberries are harvested using examples and information from the text.
- >Response demonstrates an understanding of the concept that cranberries have the ability to float, "...the ripe cranberries float..."
- >Response fails to explain modern uses for the berries.

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Cranberries are harvested today by flooding the bogs, beating the plants to loosen the fruit. Then they are pushed into one end of the bogs with long wooden sticks. Then lifted on conveyor belts, then boxed. Cranberries are used today to make healthy fruit drinks, they are also used at thanksgiving.

Score Point 2

- >Response demonstrates a partial understanding of how cranberries are harvested and used today.
- >Response accurately summarizes how cranberries are harvested using examples and information from the text.
- >Response provides a modern use for the berries, "...used today to make healthy fruit drinks."
- >Response fails to demonstrate an understanding of the concept that cranberries have the ability to float.

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Cranberries are harvested today just like Peg Leg John many years ago. The cranberry is harvested on the ground. It look like a low-lying evergreen. After they have grown the farmer floods their field or cranberry bog. A machine beats the plants to make them loose their fruit and the good ones float to the top. The cranberry is a popular Thanksgiving Day food. Its not certain they were on the first Thanksgiving Day Menu. Cranberries are also used in a juice.

Score Point 2

- >Response demonstrates a partial understanding of how cranberries are harvested and used today.
- >Response provides some information to explain how cranberries are harvested, "farmers flood their field," and "a machine beats the plants to loosen the fruit," but fails to explain the collection process (rafting).
- >Response demonstrates an understanding of the concept that cranberries have the ability to float, "...the good ones float to the top."
- >Response provides a modern use for the berries, "...used in juice."

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Cranberries today are bounced to see if they are good or not. They also flooded the bogs and the good berries would float. We use cranberries today at Thanks Giving to eat.

Score Point 1

- >Response demonstrates incomplete understanding of the information presented in the passage about how cranberries are harvested and used today.
- >Response includes some accurate information, "...flood the bogs and the good berries would float."
- >Response includes irrelevant information, "Cranberries today are bounced to see if they are good or not" and information that is too general, "We use cranberries today at Thanksgiving to eat."

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

Cranberries are very popular. They harvest them. This is how they harvest them. First, they use machines to loosen the berries. then they drop them to see if they bounce. Last they package them.

Score Point 1

- >Response demonstrates incomplete understanding of the information presented in the passage about how cranberries are harvested and used today.
- >Response includes some accurate information, "they use machines to loosen the berries."
- >Response includes irrelevant information, "they drop them to see if they bounce."
- >Response fails to provide a modern use for the berries.

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

you can use cranberries to eat with alot of things.

Score Point 0

- >Response demonstrates no understanding of the information presented in the passage about how cranberries are harvested and used today.
- >Response is too vague to receive credit.

Write a summary explaining how cranberries are harvested and used today. Be sure to thoroughly support your answer using details and examples from the passage. Write your answer on the lines below.

They grow under
water and then a
machine comes and pulls
the up to the surface and
they soak all them in to
a hot water machine.

Score Point 0

- >Response demonstrates no understanding of the information presented in the passage about how cranberries are harvested and used today.
- >Response is inaccurate and confused.

Mathematics

Sample Directions for Administering the Mathematics Test

Make sure each student has his or her own test book, a No. 2 pencil, an extra eraser, scratch paper, and the following manipulatives:

- ☐ Ruler
- ☐ Calculator for Session 2
(4-function calculator required; use of scientific calculator is student preference)

NOTE: *The use of a calculator is **not** allowed to solve the problems in Session 1.*

Also required for the operational test, but not for this released item book:

- ☐ Tangrams, 1 set
- ☐ Protractor

Students' test books should be closed.

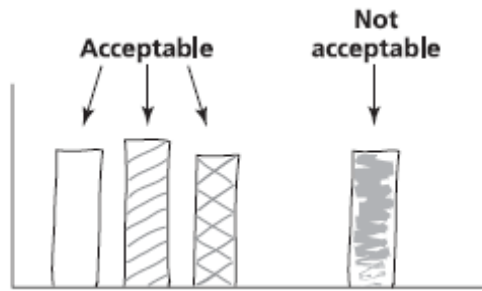
SAY Remember to use only a No. 2 pencil in this test. In Session 1, you will be answering multiple-choice questions and short answer questions. Multiple-choice questions are questions that ask you to choose the best answer. For the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

You may use scratch paper to work the multiple-choice questions, but remember to fill in the circle that goes with the answer you choose.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

For the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

Demonstrate by drawing the illustration below on the board.



Now you will do Session 1 of the Mathematics test. Remember to read all of the directions and information in the test book. When you come to the word “STOP” at the bottom of the page, you have finished Session 1. You may go back and check your answers, but do not go on to Session 2 of the Mathematics test. When you have finished, sit quietly until everyone else has finished.

You will have 10 minutes to do Session 1. Make sure you stop at the end of Session 1.

Are there any questions?

When you are sure that all students understand the directions, continue.

SAY You may begin.

Record the starting and stopping times for Session 1.

Record the Starting Time:	Add 10 Minutes:	Record the Stopping Time:
_____	+ 10 _____	_____

Check to be sure that students are marking and writing their answers in the appropriate places in their test books.

At the stopping time,

SAY Please open your test book to Page 2.

Demonstrate. Check to be sure that all students are in the correct place in their test books.

SAY Stop. Put down your pencil and close your test book. This is the end of Session 1.

Pause to be sure that all students have closed their test books. Before proceeding to Session 2, make sure each student has a calculator. During an actual test administration, students would be required to clear their calculators' memories immediately before and after each calculator-allowed session.

SAY Now, open your test book to the page labeled “Mathematics Session 2.”

In Session 2, you will be answering multiple-choice questions and short-answer questions. Multiple-choice questions are questions that ask you to choose the best answer. Remember, for the multiple-choice questions, you must fill in the circle completely and make your mark heavy and dark. If you want to change an answer, completely erase the mark you made before making a new mark. You must fill in only one circle for each multiple-choice question.

Short-answer questions are questions that ask you to write your answer instead of filling in a circle. Each short-answer question has a Step A and a Step B. Write your answers within the boxed area only, on the lines and/or in the space provided. Be sure to answer the question completely to show you clearly understand the question. Do not write outside the boxed area. The boxed area is your answer space. Only what you write in the answer space will be scored. You do not need to use the entire answer space.

Remember, for the short-answer questions, if you are asked to complete or draw a chart or figure, please do not use shading in your answer. If you need to erase, make sure you erase completely.

You will have 35 minutes to do Session 2. Remember to read all of the directions and information in this part of the test book. When you come to the word “STOP” at the bottom of the page, you have finished Session 2.

You may go back over Session 2 to check your answers, but do not go back to Session 1. When you have finished, sit quietly until everyone else has finished.

Are there any questions?

When you are sure that all students understand the directions, continue.

SAY You may begin.

Record the starting and stopping times for Session 2.

Record the Starting Time:	Add 35 Minutes:	Record the Stopping Time:
_____	+ 35	_____

SAY Stop. This is the end of Session 2. Please close your test book.

Collect all test materials. Use the information on the following pages to score the multiple-choice and constructed-response items.

Mathematics Item Information

Item	Answer Key	Calculator Allowed	Objective/Subskill	Depth of Knowledge Level	2005–06 Item Statistics SR: Percent of Students who Chose A, B, C, or D (*Indicates Correct Response). BCR: Percent of Students who Received 0, 1, or 2 Points					Scale Score Location
					Format	A or 0	B or 1	C or 2	D	
1	A	No	Fb	2	SR	*47%	41%	7%	4%	548
2	B	No	Ba	1	SR	2%	*95%	1%	0%	417
3	C	No	Fc	2	SR	1%	2%	*94%	2%	422
4	D	No	Bb	1	SR	2%	7%	3%	*87%	459
5	B	No	Bb	1	SR	2%	*88%	6%	2%	439
6	C	Yes	Fc	4	SR	11%	12%	*65%	10%	503
7	C	Yes	Fa	2	SR	25%	3%	*65%	5%	508
8	A	Yes	Da	2	SR	*59%	15%	14%	12%	516
9	B	Yes	Cc	2	SR	27%	*64%	6%	3%	550
10	B	Yes	Ca	1	SR	8%	*81%	7%	3%	475
11		Yes	Bb	3	A-BCR	46%	52%			508
11		Yes	Aa	3	B-BCR	20%	25%	52%		480
12	B	Yes	Dc	2	SR	10%	*61%	23%	6%	542
13	B	Yes	Eb	2	SR	12%	*57%	5%	26%	530
14	A	Yes	Ea	1	SR	*64%	16%	9%	10%	528
15	A	Yes	Cb	2	SR	*51%	37%	7%	4%	532
16	C	Yes	Db	1	SR	1%	1%	*97%	1%	399
17		Yes	Cb	2	A-BCR	48%	49%			513
17		Yes	Ab	3	B-BCR	30%	43%	23%		525
18	C	Yes	Ea	2	SR	24%	11%	*46%	18%	559
19	B	Yes	Db	2	SR	3%	*75%	18%	3%	482
20	A	Yes	Fa	2	SR	*46%	2%	47%	5%	596

Objective/Subskill and Depth of Knowledge Level information follows this table.
 SR: selected response; A-BCR: brief constructed response, part A; B-BCR: brief constructed response, part B.

Performance Category Scale Score Range

Minimal Performance	Basic	Proficient	Advanced
463 and below	464–484	485–531	532 and above

Mathematics Objectives and Subskills

Beginning of Grade 6

How to use the Framework

The mathematics assessment framework is an indication of the knowledge and skills that will be assessed on the November WKCE-CRT. ***This information does not replace your local curriculum.*** However, you may wish to ensure that your local curriculum includes the knowledge and skills described in the framework.

This section of the framework describes the types of content that students may encounter on the WKCE-CRT

The knowledge and skills to be assessed are organized into objectives, subskills, and descriptors as shown below. WKCE-CRT results will be reported by objective and subskill.

- A. Objective:** A group of cognitively related skills.
- A.a. **Subskill:** A group of related knowledge and skills that *may include, but is not limited to*, the descriptors which follow.
- **Descriptor:** an example of a specific knowledge or skill that may be assessed.

Objectives, Subskills, and Descriptors

Objective Mathematical Processes

A:

Students will effectively use mathematical knowledge, skills, and strategies related to reasoning, communication, connections, representation, and problem solving.

Descriptors, such as but not limited to

- Use reasoning and logic to:
 - Perceive patterns
 - Identify relationships
 - Formulate questions
 - Pose problems
 - Make conjectures
 - Justify strategies
 - Test reasonableness of results
- Communicate mathematical ideas and logical reasoning using the vocabulary of mathematics in a variety of ways (e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models).
- Connect mathematics to the real world, as well as within mathematics.
- Create and use representations to organize, record, and communicate mathematical ideas.
- Solve and analyze routine and non-routine problems.

Objective Number Operations and Relationships

B:

Subskill

B.a.:

Concepts

Descriptors, such as but not limited to

- Recognize and apply place-value concepts to whole numbers less than 10,000,000.
- Read, write, and represent numbers using words, numerals, pictures (base-ten blocks), number lines, arrays, expanded forms ($12,436=10,000+2,000+400+30+6$), and symbolic renaming (e.g., $12,436=12,450-14$).

- Compare and order numbers less than 100,000 represented in numbers, arrays, symbols (<, >, =) and words.
- Identify and use number theory concepts:
 - prime and composite numbers
 - divisibility potential of numbers (divisors of 1-10, 25).
 - least common multiples through 24
 - greatest common factors through 50
- Read, write and identify monetary amounts represented with visual models.
Compare and order monetary amounts.
Equate a monetary value with its benchmark fraction and percent (e.g., \$.25=1/4=25%)
- Demonstrate basic understanding of proportionality in proportional contexts.
- Read, write, identify, order, and compare mixed fractions.
Represent fractions using numbers, pictures, and number lines.
Rename improper fractions to mixed numbers in lowest terms.
Identify and represent equivalence between fractions, percents, and decimals.

Subskill Computation

B.b.:

Descriptors, such as but not limited to

- Use all operations in everyday situations to solve single- or multi-step word problems.
- Solve three- and four-digit addition and subtraction with regrouping, multiplication of three-digit by two-digit numbers, division with single-digit divisors and four-digit dividends with two-step or mixed operation problems.

Compute with decimals in the context of money and make change.
- Solve problems using basic multiplication and division facts.
- Rename improper fractions.

Add and subtract fractions with unlike denominators (halves, thirds, fourths, fifths, and tenths) with sums or differences between 0 and 1.
- Estimate using basic whole number operations, benchmark fractions, and benchmark decimals.
- Determine reasonableness of answers.

Objective Geometry

C:

Subskill Describing figures

C.a.:

Descriptors, such as but not limited to

- Recognize and name polygons with 3, 4, 5, 6 or 8 sides.
- Identify lines and line segments in a plane figure.
- Classify plane figures by characteristics of angles (acute, obtuse and right) and describe rays found in open-angle situations.

Subskill Spatial relationships and transformations

C.b.:

Descriptors, such as but not limited to

- Use tangrams to describe, model, and construct plane figures.
 - Identify figures that are congruent and/or similar.
 - Describe and compare cubes, rectangular, and triangular prisms and rectangular and triangular pyramids from nets (flat patterns).
 - Use slides, flips, and turns on figures. Identify congruent shapes using figures that have been manipulated by one or two motions (slides, flips and turns).
-

- Identify lines of symmetry and the number of lines of symmetry in figures and design shapes that have at least one line of symmetry.
- Identify and describe 3-dimensional figures from multiple perspectives.

Subskill Coordinate systems

C.c.:

- Identify and plot the coordinates of locations or objects on simple one quadrant grids using numbers only for coordinates, (e.g., (3, 2)).
- Locate the fourth coordinate pair when given three vertices of a rectangle or parallelogram on a coordinate grid.

Objective Measurement

D:

Subskill Measurable attributes

D.a.:

Descriptors, such as but not limited to

- Identify appropriate units to measure length, liquid capacity, volume, time, weight/mass, temperature, including mixed measures. Units include: inches, feet, yards (i.e., 1 foot 3 inches) miles, centimeters, millimeters, meters, kilometers, ounces, cups, quarts, gallons, liters, hours, minutes, seconds (i.e., 1 hour 15 minutes), days, months, years, ounces, pounds, grams, kilograms, and degrees Fahrenheit/Celsius.
- Compare attributes of length, volume, and weight by observation or when given actual measurements.
- Make measurement conversions within a system between units (e.g., feet and yards; inches and yards; quarts and gallons; meters and centimeters; seconds and hours).

Subskill Direct measurement

D.b.:

Descriptors, such as but not limited to

- Measure down to the nearest 1/8-inch, centimeter, or millimeter.
Determine angle measurement to nearest five degrees using a protractor.
- Read and interpret measuring instruments to determine the measurement of objects with standard units (U.S. customary).
- Determine and compare elapsed time in problem-solving situations.

Subskill Indirect measurement

D.c.:

Descriptors, such as but not limited to

- Estimate measurements using U.S. customary and metric measurement.
- Determine the area of regular shapes including right triangles.
- Determine distance between points using a scale.

Objective Statistics and Probability

E:

Subskill Data analysis and statistics

E.a:

Descriptors, such as but not limited to

- Formulate questions to collect, organize and display data.
- Collect, organize and display data in appropriate graphs or charts.
- Draw reasonable conclusions based on contextual data.
- Use data to predict outcomes or trends from graphs and tables.
- Extract, interpret, and analyze data from single bar graphs, tables and charts, line plots, context, circle graphs, and Venn diagrams.

- Describe a given set of data of ten or fewer items/numbers using the terms mean, median, mode, and range to extract information from organized charts, tables, graphs, and Venn diagrams in problems with and without context.

Subskill Probability

E.b.:

Descriptors, such as but not limited to

- Determine the likelihood of future events, predict outcomes of future events, and test predictions using data from a variety of sources.
- Choose or design an event that is fair or unfair.
- Determine the probability of events in context using words, percents, or fractions.
- Describe and determine the number of combinations of selecting 3 items from 4 or more items.

Objective Algebraic Relationships

F:

Subskill Patterns, relations and functions

F.a.:

Descriptors, such as but not limited to

- Recognize, extend, describe, create, and replicate a variety of patterns including attribute, numeric, and geometric patterns.
- Represent patterns and relationships with pictures, table, and charts.
- Describe a rule that explains a functional relationship or pattern using addition, subtraction, or multiplication rules.
- Determine a future event in a pattern up to the tenth item when given the first five.
- Solve simple two-step, two operation patterns (e.g., 5, 8, 6, 9, 7, 10, 8.....). (Pattern: +3-2....). Represent patterns and relationships with pictures, table, and charts.

Subskill Expressions, equations and inequalities

F.b:

Descriptors, such as but not limited to

- Demonstrate basic understanding of equality and inequality using symbols (<, >, =) with multi-step, mixed operations.
- Solve one-step equations with “box” variable and whole number coefficients in problems with and without context using whole number coefficients.
- Solve two-step multi-operation equations with “box” or letter variable and whole number coefficients with and without context (e.g., $3 * \text{“box”} + 1 = 7$).
- Represent problem situations with one or two-step equations or expressions. Solve simple two-step, two operation patterns.
- Solve two-step open sentences involving all operations.
- Solve equations involving any two operations.
Ex: $3 * 4 - 2 = ?$
Ex: $12/3 + 1 = \text{“box”}$
Ex: $5 * 2 - 1 = a$

Subskill Properties

F.c.:

Descriptors, such as but not limited to

- Use the commutative property of multiplication with positive single digits.
 - Use the inverse relationship of division and multiplication with single whole digits.
 - Simplify (evaluate) two-step numerical expressions using correct order of operations.
 - Demonstrate understanding of distributive property.
 - Demonstrate understanding of order of operations by solving two-step open sentences involving all operations.
-

Mathematics Depth of Knowledge

The representative examples for the following depth of knowledge categories are intended to reflect student performance expectations with regard to the level of mental effort and amount of information integrated by the student. Items are targeted at one of four levels of cognitive demand. Each level of demand is represented by items with a range of difficulty, as indicated by the percentage of students who answered the item correctly or by scale score location. Assuming grade-appropriate vocabulary and test items, these levels are viable and useful across all grades.

Level 1: Recognizing and Recalling

Students recognize and recall basic facts, terms, concepts, and definitions of the content and processes of mathematics. For example, students may be required to do computation with whole numbers, fractions, decimals, and integers.

Level 2: Using Fundamental Concepts and Procedures

Students describe or apply basic facts, terms, rules, concepts and definitions of the content and processes of mathematics.

Level 3: Concluding and Explaining

Students demonstrate an understanding of complex ideas, draw conclusions based on this understanding, and communicate ideas and conclusions effectively.

Level 4: Evaluating, Extending, and Making Connections

Students synthesize skills and techniques from various concepts of mathematics to solve multifaceted problems, and justify conclusions using mathematical definitions, properties, and principles. For example, students may be required to support mathematical arguments with definitions, properties, and principles.

Mathematics Rubric for Constructed-Response Items

Step B of the constructed-response items is scored using a generic rubric.

- 2 points** The student demonstrates a thorough understanding of the mathematical concepts and/or procedures represented in the problem. The student uses appropriate mathematical procedures and/or concepts to explain or justify the response to Step A, and provides clear and complete explanations and interpretations containing words, calculations, or symbols, unless otherwise specified in the item stem.
- The response may contain minor flaws that do not detract from the demonstration of a thorough understanding of the problem.
- 1 point** The student demonstrates only a partial understanding of the mathematical concepts and/or procedures represented in the problem. The response lacks an essential understanding of the underlying mathematical concepts used to provide the response to Step A.
- The response contains errors related to the misinterpretation of important aspects of the problem, misuse of mathematical procedures and/or concepts, or misinterpretation of results.
- 0 points** The student provides a completely incorrect explanation or justification, or one that cannot be interpreted, or no response at all.

Mathematics Constructed-Response Item Scoring Guides

Form: Public Release	Item #: 11	Item Type: BCR	TB Page #: 6	AB Page #: n/a
Objective for Step A: B. Number Operations & Relationships				Max Score Pts:
Subskill: B.b. Number Computation				Step A: 0–1
Objective for Step B: A. Mathematical Processes				Step B: 0–2

Sample correct response

Total cost of ice cream: $3 \times \$1.78 = \5.34
 Total change: $\$10 - \$5.34 = \$4.66$.

Step A: Response is limited to correct answer or range below

One of the following:

- \$4.66
- 4.66

Step B: Responses may include, but may not be limited to, the Answer Cues below

2 points Both of the following tasks are accomplished:

- The student shows understanding of how to calculate the cost of the ice creams.
- The student shows understanding of how to calculate the change.

1 point One of the following applies:

- The student accomplishes only one of the above tasks.
- The student accomplishes both of the above tasks, but with a computational error. (See note below.)

0 points The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.

Note: If an arithmetic error leads to loss of credit for Step A, and the process is otherwise correct, award full credit for Step B.

Form: Public Release	Item #: 17	Item Type: BCR	TB Page #: 9	AB Page #: n/a
Objective for Step A: C. Geometry				Max Score Pts:
Subskill: C.c. Transformations				Step A: 0–1
Objective for Step B: A. Mathematical Processes				Step B: 0–2

Step A: Response is limited to correct answer or range below



Note: Accept any other closed shape with exactly one line of symmetry, having the line of symmetry drawn on the shape.

Step B: Responses may include, but may not be limited to, the Answer Cues below

2 points The student shows understanding of line symmetry: that folding or flipping the shape along the line of symmetry creates two congruent figures. [See Note.]

1 point One of the following applies:

- The student states that the line of symmetry goes down the middle of the figure, without indicating that the two parts are congruent.
- The student explains why there is only one line of symmetry, without indicating why the two parts are symmetrical.

0 points The student provides a completely incorrect explanation or justification, or one that cannot be interpreted.

Note: The term “congruent” is not required: award full credit for any response indicating that folding the shape along the line of symmetry creates equal shapes/parts/halves/sides.

Anchor Papers for Mathematics Constructed-Response Items

Item 11

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

Step A

How much change did Geoffrey receive?

Answer: \$ 4.66

Step B

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

First, you have to do the problem $\$1.78 \times 3$ to find out how much the ice cream cones cost, which is \$5.34. Then you have to subtract \$5.34 from \$10.00 to find ^{out} how much change Geoffrey received. The answer is \$4.66.

Step A

Score Point 1

Step B

Score Point 2

- > Student calculates the cost of ice creams
- > Student calculates the amount of change

Item 11

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

Step A

How much change did Geoffrey receive?

Answer: \$ 4.66

Step B

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

I x 1.78 by 3 the subtracted that
by 3

Step A

Score Point 1

Step B

Score Point 1

> Student indicates calculating of the cost of the ice creams

> [student does not indicate calculating of the amount of change]

Item 11

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

Step A

How much change did Geoffrey receive?

Answer: \$ 4.66

Step B

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

I did was $10.00 + 1.78$ three times and I
equal it and it got me 10.66 .

Step A

Score Point 1

Step B

Score Point 0

< [no correct process]

Item 11

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

Step A

How much change did Geoffrey receive?

Answer: \$ 5.85

Step B

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

First I multiplied $1.78 \times 3 = 5.25$. Then
I subtracted $10.00 - 5.25$, and I got
5.85.

Step A

Score Point 0

Step B

Score Point 2

> Student displays the correct process; computational error led to loss of credit in Step A, but no double jeopardy in Step B

Item 11

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

Step A

How much change did Geoffrey receive?

Answer: \$ 5.34

Step B

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

I took $\$1.78 \times 3 = \5.34 the reason
I took the price by 3 is because
Geoffrey wanted 3 ice cream
cones.

Step A

Score Point 0

Step B

Score Point 1

> Student correctly calculates the cost of the ice creams

< [student does not indicate calculating the amount of change]

Item 11

Geoffrey had a 10-dollar bill. He bought three ice cream cones. Ice cream cones cost \$1.78 each, including tax.

Step A

How much change did Geoffrey receive?

Answer: \$ 5.40

Step B

Use what you know about money/decimals to explain how you determined the amount of change Geoffrey received. Use words and/or numbers in your explanation.

I $1.78 + 2 \times 2 = 5.40$

Step A

Score Point 0

Step B

Score Point 0

< [incorrect process]

Item 17

Step A

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



Step B

Explain how your line shows the symmetry of your shape.

When you fold the figure in half on that line, the figure's sides match up exactly.

Step A

Score Point 1

> Acceptable shape with only one line of symmetry (isosceles triangle)

Step B

Score Point 2

> Concept of symmetry explained correctly (folded sides match exactly)

Item 17

Step A

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



Step B

Explain how your line shows the symmetry of your shape.

Well my triangle can only
be split in to 2 vertically because
of it's unequal sides.

Step A

Score Point 1

> Acceptable shape with only one line of symmetry (isosceles triangle)

Step B

Score Point 1

> Explains why there is only one line of symmetry

< [doesn't address the reasons for calling the parts symmetrical]

Item 17

Step A

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



Step B

Explain how your line shows the symmetry of your shape.

It only has one line of symmetry
because its shape is different in a way.

Step A

Score Point 1

> Acceptable shape with only one line of symmetry (violin)

Step B

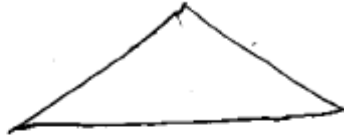
Score Point 0

< [explanation lacks understanding of symmetry]

Item 17

Step A

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



Step B

Explain how your line shows the symmetry of your shape.

You can draw a line through the middle
of the shape and there will be two equal
shapes left so it shows symmetry.

Step A

Score Point 0

< [shape acceptable, but no line of symmetry shown]

Step B

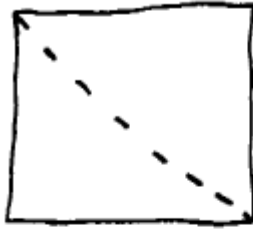
Score Point 2

> Concept of symmetry explained correctly (two equal shapes)

Item 17

Step A

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



Step B

Explain how your line shows the symmetry of your shape.

On my shape it shows
symmetry by you can
cut it in an equal half and
it will be perfect.

Step A

Score Point 0

< [shape has more than one line of symmetry]

Step B

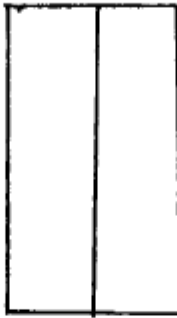
Score Point 2

> Concept of symmetry explained correctly (cut in equal halves)

Item 17

Step A

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



Step B

Explain how your line shows the symmetry of your shape.

It goes right down the middle

Step A

Score Point 0

< [shape has more than one line of symmetry]

Step B

Score Point 1

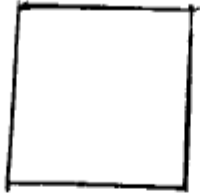
> Student states one requirement for symmetry

< [doesn't mention creation of 2 equal halves]

Item 17

Step A

Design a closed shape that has exactly one line of symmetry. Show the line of symmetry on your shape.



Step B

Explain how your line shows the symmetry of your shape.

The line is straight across from
the other line.

Step A

Score Point 0

< [shape has more than one line of symmetry]

Step B

Score Point 0

< [explanation lacks understanding of symmetry]

Guide to Grade 6 Released Item Books
In READING and MATHEMATICS

Wisconsin Department of Public Instruction
Elizabeth Burmaster, State Superintendent